CLAIMS

1. A mobile communication system comprising at least one mobile communication network (PLMN); at least one service centre (PTM-SC) for point-to-multipoint services; and at least one network node (SGSN) through which a point-to-multipoint service is transmitted to cells belonging to a destination area, the geographical destination area of the point-to-multipoint service being indicated in the system as a logical name,

characterized in that

the system comprises memory means (AR) for mapping each predetermined logical name to one or more network element addresses (PTM-SC, SGSN) of the system, and that

a service centre (PTM-SC) is arranged to inquire, in response to a received service request, from the memory means (AR) the addresses of the network elements (PTM-SC, SGSN) corresponding to the logical name of the destination area and to transmit the point-to-multipoint service via the network elements to the geographical destination area.

2. A mobile communication system according to claim 1, **characterized** in that

the service centre (PTM-SC) is also arranged to check whether the network element address is the address of a second service centre and, if yes, to transmit the service request to the second service centre.

3. A mobile communication system according to claim 2, **characterized** in that

the memory means (AR) are arranged to link to the address of the second service centre associated with the logical name a second logical name corresponding to the logical name in the service area of the second service centre, and

the service centre (PTM-SC1) is arranged to replace the logical name given in the service request with said second logical name before the service request is transmitted to the second service centre (PTM-SC2).

4. A mobile communication system according to claim 1 ~~, 2 or 3,~~ **characterized** in that

the logical name of the destination area can be determined by means of at least two logical names and their intermediate logical operator, the logical operator indicating how the areas of the logical names relate to each other, and

the memory means (AR) are arranged to map the logical name of the destination area that is formed by the two or more logical names and the intermediate logical operator between successive names to one or more network element addresses of the system.

5. A method for transmitting a point-to-multipoint service of a mobile communication system to a destination area of the service indicated as a logical name in a service request, the mobile communication system comprising at least one mobile communication network, at least one service centre for point-to-multipoint services, and at least one network node through which the point-to-multipoint service is transmitted to the cells located within the destination area,

characterized by the method comprising the steps of

determining logical names for geographical destination areas of the service;

maintaining an address list for each logical name in the mobile communication network, the address list being used for mapping a logical name to one or more network element addresses of the system;

receiving a service request (5-1) at a first service centre, the service request indicating the destination area as a logical name;

mapping the logical name by means of the address list to one or more network element addresses (5-2 and 5-3), and

transmitting the service via the network elements to the geographical destination area.

6. A method according to claim 5, **characterized** by the method comprising the steps of

checking the address of each network element;

if the address is an address of a second service centre, forwarding the service request to it (5-4); and

if the address is a network node address, transmitting the service via the node to those cells in the service area of the node that belong to the destination area (5-6, 5-8) of the service.

7. A method according to claim 5 ~~or 6,~~ **characterized** by the method comprising the steps of

determining at least one logical operator for indicating the destination area by using at least two different logical names and their intermediate logical operator, and

mapping each logical name to one or more network element addresses; and

combining the network element addresses as determined by the logical operator.

8. A method for transmitting a point-to-multipoint service of a mobile communication system to a destination area of the service, at least part of the destination area being outside the service area (A1-1) of a first service centre (PTM-SC1), the first service centre receiving a service request from a service provider,

characterized by the method comprising the steps of

setting up a connection from the first service centre to a second service centre (PTM-SC2);

maintaining information (AR1) about the address (PTM-SC2) of the second service centre and its service area (A1-2) at the first service centre;

receiving the service request indicating the destination area (A1) at the first service centre;

checking at the first service centre (PTM-SC1) whether at least part of the destination area is within the service area of the second service centre;

and, if yes,

forwarding the service request to the second service centre (PTM-SC2).

9. A method according to claim 8, **characterized** in that, when at least part of the destination area is within the service area of the second service centre, the method further comprises the steps of

setting the part of the destination area which is within the service area of the second service centre as the destination area of the service request received at the first centre, and

forwarding the service request to the second service centre.

10. A method according to claim 8 ~~or 9~~, **characterized** in that

at least part of the service area of the second service centre is within the service area of the first centre, the common service area being referred to as a transferable service area, and

the method further comprising the steps of

comparing the load of the first service centre with the load of the second service centre;

determining a threshold value for the difference between the loads; and,

when the load difference between the service centres reaches the threshold value, determining the transferable service area to belong within the service area of the service centre with a smaller load.

11. A method according to claim 8, ~~9 or 10~~, **characterized** in that the destination area of the service request received by the first service centre is indicated as a list of cells.

12. An area register (AR) which forms part of a mobile communication system comprising at least one network, the network comprising a service centre for point-to-multipoint services for transmitting a point-to-multipoint service to a geographical destination area indicated in a service request, the destination area being indicated as a logical name, **characterized** in that the area register comprises

a list (71) of logical names for at least one service centre and at least one network element address list (72, 73) of the system corresponding to each logical name in order to allow a logical name to be mapped to at least one system network element address; and

processing means (6) for receiving inquiries concerning the logical names and for replying to the inquiries.

13. An area register according to claim 12, **characterized** in that the processing means (6) are arranged to

identify logical operators and

map the logical name of a destination area formed by two or more logical names and an intermediate logical operator between successive names to one or more network element addresses of the system.

14. An area register according to claim 12 ~~or 13~~, **characterized** in that at least one logical name (Nordic countries) is divided into logical names of a lower hierarchical level (Finland, Sweden) so that the geographical destination area of the logical name of the higher hierarchical level is formed of the geographical destination areas of the logical names of the lower hierarchical level.

15. An area register according to claim 12, ~~13 or 14~~, **characterized** in that it comprises updating means (8) for adding logical names to and for removing them from the list (71) of logical names and for adding network element addresses to and for removing them from the

network element address list (72, 73).

16. A service centre (PTM-SC) for transmitting point-to-multipoint services in a mobile communication system to a geographical destination area of the service, the service centre comprising reception means (10) for receiving a service request, the service request having a destination area that can be indicated as a logical name,

characterized in that the service centre further comprises

inquiry means (11) for mapping the logical name given in the service request to at least one network element address of the system, and

transmission means (12) for transmitting the service to the destination area via each network element.

17. A service centre according to claim 16, **characterized** in that it comprises

control means (11) for checking whether a network element is a second service centre, and

if yes, the transmission means (12) are arranged to forward the service request to the second service centre.

18. A service centre according to claim 16 ~~or 17~~, **characterized** in that it comprises

load means (13) for monitoring the load of the service centre itself and that of the second service centre, and

determining means (11) responsive to the load means for re-determining the service area of the second service centre.